

IN THE CLAIMS:

- 1 1. (CURRENTLY AMENDED) A method for reassembling a packet by a network de-
2 vice, the method comprising the steps of:
3 locating a fragment packet descriptor associated with the packet, the fragment
4 packet descriptor including a pointer to an area of memory where data of a fragment is
5 stored; and
6 placing the contents of the fragment packet descriptor in a packet descriptor asso-
7 ciated with the packet, the packet descriptor descriptive of the entire packet.
- 1 2. (ORIGINAL) The method of claim 1 wherein the step of locating a fragment packet
2 descriptor associated with the packet further comprises:
3 locating an entry in a reassembly table associated with the packet; and
4 dereferencing a pointer held in the entry to locate the fragment packet descriptor.
- 1 3. (ORIGINAL) The method of claim 1 further comprising the steps of:
2 receiving a request to reassemble the packet.
- 1 4. (ORIGINAL) The method of claim 3 wherein the request comprises:
2 an index to an entry in a reassembly table that is associated with the first fragment
3 of the packet; and
4 a length value that is a count of the total number of entries in the reassembly table
5 that are associated with the packet.
- 1 5. (ORIGINAL) The method of claim 1 further comprising the step of:
2 deallocating the fragment packet descriptor.

1 6. (CURRENTLY AMENDED) A computer readable medium that includes computer
2 executable instructions for reassembling a packet, the computer executable instructions
3 comprising instructions configured to: performing the method recited in claim 1.

4 locate a fragment packet descriptor associated with the packet, the fragment
5 packet descriptor including a pointer to an area of memory where data of a fragment is
6 stored; and

7 place the contents of the fragment packet descriptor in a packet descriptor associ-
8 ated with the packet, the packet descriptor descriptive of the entire packet.

1 7. (CURRENTLY AMENDED) An apparatus for reassembling a packet, the apparatus
2 comprising:

3 means for locating a fragment packet descriptor associated with the packet, the
4 fragment packet descriptor including a pointer to an area of memory where data of a
5 fragment is stored; and

6 means for placing the contents of the fragment packet descriptor in a packet de-
7 scriptor associated with the packet, the packet descriptor descriptive of the entire packet.

1 8. (ORIGINAL) The apparatus of claim 7 further comprising:

2 means for locating an entry in a reassembly table associated with the packet; and

3 means for dereferencing a pointer held in the entry to locate the fragment packet
4 descriptor.

1 9. (ORIGINAL) The apparatus of claim 7 further comprising:

2 means for receiving a request to reassemble the packet.

1 10. (ORIGINAL) The apparatus of claim 7 further comprising:

2 means for deallocating the fragment packet descriptor.

1 11. (CURRENTLY AMENDED) A method for reassembling a packet by a network de-
2 vice, the method comprising the steps of:

3 receiving a plurality of fragments associated with the packet;
4 determining if all the fragments for the packet have been received; and
5 issuing a request to reassemble the packet to a reassembly assist function if all the
6 fragments for the packet have been received.

1 12. (ORIGINAL) The method of claim 11 wherein the request comprises:

2 an index to an entry in a reassembly table that is associated with the first fragment
3 of the packet; and
4 a length value that is a count of the total number of entries in the reassembly table
5 that are associated with the packet.

1 13. (ORIGINAL) The method of claim 11 wherein the step of determining if all frag-
2 ments for the packet have been received further comprising:

3 examining a bit map that indicates whether or not the fragments have been re-
4 ceived.

1 14. (ORIGINAL) The method of claim 11 further comprising the step of:

2 tracking a fragment of the packet.

1 15. (ORIGINAL) The method of claim 14 wherein the step of tracking a fragment of the
2 packet further comprising the steps of:

3 keeping a copy of a packet handle associated with the fragment in a reassembly
4 table; and

5 maintaining a location in a bit map that indicates whether or not the fragment has
6 been received.

1 16. (CURRENTLY AMENDED) A computer readable medium containing computer
2 executable instructions for reassembling a packet, the computer executable instructions
3 comprising instructions configured to: ~~performing the method recited in claim 11,~~
4 receive a plurality of fragments associated with the packet;
5 determine if all the fragments for the packet have been received; and
6 issue a request to reassemble the packet to a reassembly assist function if all the
7 fragments for the packet have been received.

1 17. (CURRENTLY AMENDED) An apparatus for reassembling a packet, the apparatus
2 comprising:
3 means for receiving a plurality of fragments associated with the packet;
4 means for determining if all the fragments for the packet have been received; and
5 means for issuing a request to reassemble the packet to a reassembly assist func-
6 tion if all the fragments for the packet have been received.

1 18. (ORIGINAL) The apparatus of claim 17 further comprising:
2 means for examining a bit map that indicates whether or not the fragments have
3 been received.

1 19. (ORIGINAL) The apparatus of claim 17 further comprising:
2 means for tracking a fragment of the packet.

1 20. (ORIGINAL) The apparatus of claim 19 further comprising:
2 means for keeping a copy of a packet handle associated with the fragment in a
3 reassembly table; and
4 means for maintaining a location in a bit map that indicates whether or not the
5 fragment has been received.

1 21. (CURRENTLY AMENDED) A system for reassembling a packet, the system com-
2 prising:

3 a processor; and

4 a reassembly assist configured to communicate with the processor;

5 whereby the processor receives a plurality of fragments associated with the packet, de-
6 termines if all the fragments for the packet have been received and issues a request to re-
7 assemble the packet to the reassembly assist to reassemble the packet.

1 22. (PREVIOUSLY PRESENTED) A method for reassembling a packet, the method
2 comprising the steps of:

3 receiving a fragment packet having a fragment packet descriptor associated
4 therewith;

5 placing the contents of the fragment packet descriptor in a reassembly table asso-
6 ciated with the packet; and

7 in response to receiving all the fragments for the packet, issuing a request to a re-
8 assembly assist function.

1 23. (PREVIOUSLY PRESENTED) The method of claim 22, further comprising the step
2 of:

3 determining if all fragments have been received.

1 24. (CURRENTLY AMENDED) A network device for reassembling a packet, compris-
2 ing:

3 means for receiving a fragment packet having a fragment packet descriptor asso-
4 ciated therewith;

5 means for placing the contents of the fragment packet descriptor in a reassembly
6 table associated with the packet; and

7 ~~in response to receiving all the fragments for the packet~~, means for issuing a re-
8 quest to a reassembly assist function, in response to receiving all the fragments for the
9 packet.

1 25. (PREVIOUSLY PRESENTED) The apparatus of claim 24, further comprising:
2 means for determining if all fragments have been received.

1 26. (PREVIOUSLY PRESENTED) A system for reassembling a packet, comprising:
2 a processor receives a fragment packet having a fragment packet descriptor asso-
3 ciated therewith;
4 a reassembly assist configured to communicate with the processor, the reassembly
5 assist adapted to locate the fragment packet descriptor associated with the packet;
6 the processor configured to store a reassembly table, the reassembly table storing
7 the contents of the fragment packet descriptor in a packet descriptor; and
8 in response to receiving all the fragments for the packet, the processor issues a re-
9 quest to a reassembly assist function.

1 27. (PREVIOUSLY PRESENTED) The method of claim 26, further comprising the step
2 of:
3 the reassembly assist determines if all fragments have been received.

1 28. (CANCELLED)

1 29. (CURRENTLY AMENDED) A computer readable media, comprising:
2 said computer readable media having instructions written thereon for execution on
3 a processor for the practice of reassembling a packet, comprising,
4 receiving a fragment packet having a fragment packet descriptor associated
5 therewith;

6 placing the contents of the fragment packet descriptor in a packet descriptor in a
7 reassembly table associated with the packet; and
8 in response to receiving all the fragments for the packet, issuing a request to a re-
9 assembly assist function.

1 30. (PREVIOUSLY PRESENTED) A method for reassembling a packet, the method
2 comprising the steps of:
3 receiving a fragment packet having a fragment packet descriptor associated
4 therewith;
5 placing the contents of the fragment packet descriptor in a reassembly table asso-
6 ciated with the packet; and
7 in response to receiving all the fragments for the packet, issuing a request to a re-
8 assembly assist function; the reassembly function:
9 locating fragments in a fragment packet descriptor, and
10 reassembling the packet in response to a pointer in the reassembly table.

1 31. (NEW) The method of claim 1, wherein the steps of locating and placing are per-
2 formed by a reassembly assist function that operates autonomously from a packet proces-
3 sor of the network device